REMARKS

In the non-final Office Action, the Examiner objects to the declaration as defective; rejects claims 1, 2, 6, 7, 10, 13, and 17 under 35 U.S.C. § 102(e) as anticipated by ZHANG et al. (U.S. Patent No. 6,396,833); rejects claims 4, 5, 8, 9, 11, 12, 14, 15, 18, and 19 under 35 U.S.C. § 103(a) as unpatentable over by ZHANG et al. in view of NOMURA et al. (U.S. Patent Application Pub. No. 2001/0019554); rejects claims 16 and 20 under 35 U.S.C. § 103(a) as unpatentable over by ZHANG et al. in view of BITZ et al. (U.S. Patent No. 5,479,401); and objects to claim 3 as allowable if rewritten in independent form. Applicants respectfully traverse the above rejections under 35 U.S.C. §§ 102 and 103.

By way of the present amendment, Applicants amend claims 7, 13, and 16 to improve form. No new matter has been added by way of the present amendment. Claims 1-20 remain pending.

Applicants note with appreciation the indication that claim 3 would be allowable if rewritten into independent form to include all the features of the base claim and any intervening claims.

The Examiner objects to the declaration as allegedly defective. In particular, the Examiner alleges that the declaration is defective because it does not identify the citizenship of Steven Lin (Office Action, pg. 2). Applicants submit a new declaration herewith in accordance with 37 C.F.R. § 1.67(a).

For at least the foregoing reasons, Applicants respectfully request that the objection to the declaration be reconsidered and withdrawn.

Claims 1, 2, 6, 7, 10, 13, and 17 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by ZHANG et al. Applicants respectfully traverse this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. ZHANG et al. does not disclose or suggest features recited in claims 1, 2, 6, 7, 10, 13, and 17.

For example, independent claim 1 is directed to a method of packet forwarding in a router containing a plurality of forwarding tables. The method includes receiving a packet at an ingress interface; classifying the received packet based on at least a first field value contained in the header of the packet; associating one of the plurality of forwarding tables to the packet according to its classification; performing a lookup operation in the associated forwarding table according to at least a second field value contained in the header of the packet; determining an egress interface based on the lookup operation; and transmitting the received packet from the determined egress interface. ZHANG et al. does not disclose or suggest this combination of features.

For example, ZHANG et al. does not disclose or suggest determining an egress interface based on a lookup operation performed in the associated forwarding table according to at least a second field value contained in the header of the packet. The Examiner relies on step 160 (Fig. 4) and col. 4, lines 56-58, of ZHANG et al. as allegedly disclosing this feature (Office Action, pg. 3). Applicants disagree.

Step 160 in ZHANG et al.'s Fig. 4 includes routing a packet to a matching network. This step of ZHANG et al. in no way discloses or suggests determining an

egress interface based on a lookup operation performed in the associated forwarding table according to at least a second field value contained in the header of the packet, as recited in claim 1. In fact, this section of ZHANG et al. does not disclose or suggest determining an egress interface.

At col. 4, lines 54-61, ZHANG et al. discloses:

> At 158, if the destination address is contained within one of the ranges of network addresses for currently accessible networks, the process moves to 160, where the packet may be routed to a matching network. A matching network may be determined by examining the network identification (258 of FIG. 6) of the entry (254 of FIG. 6) with the address range (256 of FIG. 6) containing the destination address.

This section of ZHANG et al. discloses comparing a destination address to ranges of network addresses for currently accessible networks for a particular source address. This section of ZHANG et al. does not disclose or suggest determining an egress interface based on a lookup operation performed in the associated forwarding table according to at least a second field value contained in the header of the packet, as recited in claim 1. In fact, this section of ZHANG et al. does not disclose or suggest determining an egress interface.

For at least the foregoing reasons, Applicants submit that claim 1 is not anticipated by ZHANG et al.

Claim 2 depends from claim 1. Therefore, this claim is not anticipated by ZHANG et al. for at least the reasons given above with respect to claim 1.

Independent claim 6 recites features similar to features described above with respect to claim 1. Therefore, claim 6 is not anticipated by ZHANG et al. for at least reasons similar to reasons given above with respect to claim 1.

Amended independent claim 7 is directed to a method of configuring a networking device. The method includes generating a first forwarding table including information identifying a first plurality of egress interface ports; generating a second forwarding table including information identifying a second plurality of egress interface ports; programming a filter to initiate a lookup operation in the first forwarding table if a first field value of a received packet meets one or more conditions of a first set of conditions; programming the filter to initiate a lookup operation in the second forwarding table if a first field value meets one or more conditions of a second set of conditions. ZHANG et al. does not disclose or suggest this combination of features.

For example, ZHANG et al. does not disclose or suggest generating a first forwarding table including information identifying a first plurality of egress interface ports and generating a second forwarding table including information identifying a second plurality of egress interface ports. The Examiner relies on ZHANG et al.'s per-user routing tables as corresponding to the recited forwarding tables (Office Action, pg. 4). Applicants submit ZHANG et al.'s per-user routing tables do not include information identifying a plurality of egress interface ports, as currently recited in claim 7.

ZHANG et al. discloses the use of a source address from a received packet to identify a per-user routing table corresponding to the user who sent the packet (col. 4, lines 20-21). ZHANG et al.'s Fig. 6 depicts a per-user routing table. As illustrated in that figure, a per-user routing table includes a user address (used to identify which per-user routing table corresponds to a user), an address range field 256, and a network identifier (ID) field 258. Address range field 256 contains ranges of addresses indicating the

network addresses which correspond to the networks accessible to the user (col. 4, lines 24-33). Network ID field 358 identifies the corresponding accessible networks (col. 4, lines 24-33). ZHANG et al. in no way discloses or suggests that the per-routing table includes information identifying a plurality of egress interface ports. Therefore, ZHANG et al. cannot disclose or suggest generating a first forwarding table including information identifying a first plurality of egress interface ports and generating a second forwarding table including information identifying a second plurality of egress interface ports, as recited in amended claim 7.

For at least the foregoing reasons, Applicants submit that claim 7 is not anticipated by ZHANG et al.

Independent claim 10 is directed to a method of configuring a networking device. The method includes generating a first forwarding table; generating a second forwarding table; programming a filter to perform a lookup operation in the first forwarding table if a first field value of a received packet meets one or more conditions of a first set of conditions; and programming the filter to initiate a lookup operation in the second forwarding table if the first field value does not meet one or more conditions of the first set of conditions. ZHANG et al. does not disclose or suggest this combination of features.

For example, ZHANG et al. does not disclose or suggest programming a filter to initiate a lookup operation in a second forwarding table if the first field value of a received packet does not meet one or more conditions of the first set of conditions. With respect to this feature, the Examiner alleges "if the condition of the source address for the

first user is not met by searching through one or more per-user routing tables (i.e., not meeting one or more conditions of the first set of conditions), then the lookup operation based on the source address for the second user table can be initiated" (Office Action, pg. 5). Applicants respectfully submit that the Examiner has misinterpreted the disclosure of ZHANG et al.

ZHANG et al. discloses that a source address is extracted from a received packet (col. 4, lines 7-12). A gateway searches through one or more of the per-user routing tables to find a per-user table that includes a user address that matches the source address (col. 4, lines 44-49). ZHANG et al. in no way discloses or suggests programming a filter to initiate a lookup operation in a second forwarding table if the first field value of a received packet does not meet one or more conditions of the first set of conditions, as recited in claim 10. Instead, ZHANG et al. merely discloses comparing the source address to user addresses in the per-user routing tables until a match is found.

For at least the foregoing reasons, Applicants submit that claim 10 is not anticipated by ZHANG et al.

Amended independent claim 13 recites features similar to features described above with respect to claim 7. Therefore, claim 13 is not anticipated by ZHANG et al. for at least reasons similar to reasons given above with respect to claim 7.

Independent claim 17 recites features similar to features described above with respect to claim 10. Therefore, claim 17 is not anticipated by ZHANG et al. for at least reasons similar to reasons given above with respect to claim 10.

Claims 4, 5, 8, 9, 11, 12, 14, 15, 18, and 19 stand rejected under 35 U.S.C. §

103(a) as allegedly unpatentable over ZHANG et al. in view of NOMURA et al. Applicants respectfully traverse this rejection.

Claims 4 and 5 depend from claim 1. The disclosure of NOMURA et al. does not remedy the deficiencies in the disclosure of ZHANG et al. set forth above with respect to claim 1. Therefore, claims 4 and 5 are patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1. Moreover, these claims recite additional features not disclosed or suggested by ZHANG et al. and NOMURA et al.

Claim 4 recites that the first forwarding table contains an entry corresponding to a first label switched path. The Examiner admits that ZHANG et al. does not disclose this feature and relies on paragraph 0067 of NOMURA et al. for allegedly disclosing this feature (Office Action, pp. 7-8). Regardless of the veracity of this allegation, Applicants submit that one skilled in the art would not seek to incorporate NOMURA et al.'s alleged disclosure of a first label switched path into ZHANG et al.'s per-user routing tables, absent impermissible hindsight.

With respect to motivation, the Examiner alleges "it would have been obvious ... to use the label switch path method as taught by Nomura et al. in the per-user routing tables used by Zhang et al. for transferring IP packets and can perform IP level (layer 3: L3) routing by a switching process in lower layers (layer 2:L2) such as ATM (Asynchronous Transfer Mode), frame intermediate and Ethernet to provide service regarding traffic engineering, such as setting up optimal routes for every flow (setting up explicit routes in consideration of QoS (Quality of Service), and aggregates of IP flows),

traffic load sharing and improving failure tolerance by setting up redundant links in the label switch networks" (Office Action, pg. 8). Applicants submit that the Examiner's allegation does not explain why one would seek to modify ZHANG et al.'s per-user routing tables to include an entry corresponding to a first label switched path.

As set forth above, ZHANG et al. discloses that the per-user routing tables include a user address (used to identify which per-user routing table corresponds to a user), an address range field 256, and a network identifier (ID) field 258. Address range field 256 contains ranges of addresses indicating the network addresses which correspond to the networks accessible to the user (col. 4, lines 24-33). Network ID field 358 identifies the corresponding accessible networks (col. 4, lines 24-33). The Examiner does not logically explain why one would want to change ZHANG et al.'s per-user routing tables to include a first label switched path. The Examiner's motivation is merely a conclusory statement regarding an alleged benefit of the combination. Such motivation statements are insufficient for establishing a *prima facie* case of obviousness.

For at least these additional reasons, Applicants submit that claim 4 is patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination.

Claim 5 recites features similar to features described above with respect to claim 4. Therefore, claim 5 is patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claim 4.

Claims 8 and 9 depend from claim 7. The disclosure of NOMURA et al. does not

remedy the deficiencies in the disclosure of ZHANG et al. set forth above with respect to claim 7. Therefore, claims 8 and 9 are patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 7. Moreover, these claims recite additional features not disclosed or suggested by ZHANG et al. and NOMURA et al.

Claims 8 and 9 recite features similar to features described above with respect to claims 4 and 5. Therefore, claims 8 and 9 are patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claims 4 and 5.

Claims 11 and 12 depend from claim 10. The disclosure of NOMURA et al. does not remedy the deficiencies in the disclosure of ZHANG et al. set forth above with respect to claim 10. Therefore, claims 11 and 12 are patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 10. Moreover, these claims recite additional features not disclosed or suggested by ZHANG et al. and NOMURA et al.

Claims 11 and 12 recite features similar to features described above with respect to claims 4 and 5. Therefore, claims 11 and 12 are patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claims 4 and 5.

Claims 14 and 15 depend from claim 13. The disclosure of NOMURA et al. does not remedy the deficiencies in the disclosure of ZHANG et al. set forth above with respect to claim 13. Therefore, claims 14 and 15 are patentable over ZHANG et al. and

NOMURA et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 13. Moreover, these claims recite additional features not disclosed or suggested by ZHANG et al. and NOMURA et al.

Claims 14 and 15 recite features similar to features described above with respect to claims 4 and 5. Therefore, claims 14 and 15 are patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claims 4 and 5.

Claims 18 and 19 depend from claim 17. The disclosure of NOMURA et al. does not remedy the deficiencies in the disclosure of ZHANG et al. set forth above with respect to claim 17. Therefore, claims 18 and 19 are patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 17. Moreover, these claims recite additional features not disclosed or suggested by ZHANG et al. and NOMURA et al.

Claims 18 and 19 recite features similar to features described above with respect to claims 4 and 5. Therefore, claims 18 and 19 are patentable over ZHANG et al. and NOMURA et al., whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claims 4 and 5.

Claims 16 and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over ZHANG et al. in view of BITZ et al. Applicants respectfully traverse.

Claim 16 depends from claim 13. The disclosure of BITZ et al. does not remedy the deficiencies in the disclosure of ZHANG et al. set forth above with respect to claim 13. Therefore, claim 16 is patentable over ZHANG et al. and BITZ et al., whether taken

alone or in any reasonable combination, for at least the reasons given above with respect to claim 13.

Claim 20 depends from claim 17. The disclosure of BITZ et al. does not remedy the deficiencies in the disclosure of ZHANG et al. set forth above with respect to claim 17. Therefore, claim 20 is patentable over ZHANG et al. and BITZ et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 17.

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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